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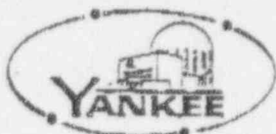

580 Main Street, Bolton, Massachusetts 01740-1398

ANDREW C. KADAK, Ph. D.
PRESIDENT and
CHIEF EXECUTIVE OFFICER

January 4, 1993

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555

Dear Tom:

I read highlights of your comments before the Commissioners on the License Renewal Rule in INSIDE NRC, particularly those regarding Yankee's and Northern States Power's applications. I would like you to know that I do not feel that a licensee can successfully renew a license under the present rule. The existing rule is vague in its requirements and can be interpreted to set an unreasonable burden of proof for licensees. I also do not believe that a component-by-component analysis is required of almost the entire plant to establish adequate confidence of public protection for operation beyond 40 years.

We have in place many programs that ensure the performance of systems and components. These include routine inspections, surveillance testing, and preventive and corrective maintenance. As you know, because of the Maintenance Rule, all of these would continue into the renewal term. Imposing the additional requirements necessary for mitigation of "aging unique to the renewal period" as further conditions, will force all licensees and the NRC staff into a costly "paper chase" that will do little to enhance safety.

It is Yankee's position that the components which require a thorough analysis for the renewal period are those components that are not expected to be replaced during the entire term of plant operation. They are typically passive, namely no moving parts, and may not be tested during the course of operation. Narrowing the rule to focus only on those components would be extremely valuable. In addition, the industry is going to be expending substantial resources implementing the Maintenance Rule. The Maintenance Rule should be the reason for excluding a major portion of plant components from detailed evaluation for license renewal. Maintenance activities manage the effects of aging for most equipment. In actuality, the increment of age mitigation activity necessary exclusively for the renewal period is relatively small.

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PDR COMMS NRCC
CORRESPONDENCE PDR

If the license renewal rule was administratively corrected to reflect the existence of the Maintenance Rule such that it was clear that "age related degradation unique to renewal" applies only to those components that are not expected to be replaced over the plant life or are neither tested nor monitored, the prospect for actually renewing licenses without compromising safety will be greatly increased. I wholly support Commissioner Curtiss' memorandum to James Taylor of November 19, 1992. Don Edwards or I would be more than happy to discuss this issue in some detail with you as we have discussed it with Commissioner Curtiss.

Sincerely yours,

Andrew C. Kadak

Lic Renewal
Vol. 6

JRC

MEMORANDUM

To: Barth W. Doroshuk

From: David Lewis

Subj: Benefits and Risks of Amending the License Renewal Rule

Date: January 7, 1993

I. Introduction

This memorandum discusses the benefits and risks of amending the definition of "age-related degradation unique to license renewal" ("ARD ULR") in the NRC 's license renewal rule. It concludes that the potential benefits of amending the license renewal rule outweigh the potential risks.

As presently worded, the definition of ARD ULR appears unworkable, and though there is a possibility of interpreting the definition imaginatively, there is a significant risk that such an interpretation would eventually be challenged and rejected in court. Amending the definition of ARD ULR would eliminate this problem. There are risks that a rulemaking proceeding might result in an expanded and less favorable rule, or that public interest groups might challenge the amended rule. These risks do

not at this juncture appear partic..rly significant. The likelihood of the rule being expanded ap.ears small, and the most likely outcome of a successful challenge to any amendments to the rule is reversion to the current rule.

This assessment has been performed in a very short time frame, as requested. This has limited the extent of the analysis.

II. Potential Benefits of Amendments

A. The Need for Screening

The Individual Plant Assessment ("IPA") required by the license renewal rule is meant to be a screening process--a process that starts with a large set of systems, structures and components ("SSCs") important to license renewal and screens out those that are not susceptible to ARD ULR. If a component could have ARD ULR (i.e. if it cannot be screened out), the license renewal applicant must either demonstrate that the degradation is addressed through an effective program or demonstrate that such a program is unnecessary. 10 C.F.R. § 54.21(a)(5).

Because of the potential cost of maintaining "effective programs" in the regulatory manner dictated by the license renewal rule,[1/] it is important that an applicant minimize the number of

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1/ Effective programs must ensure identification and mitigation of ARD ULR, contain acceptance criteria against which the

Footnote continued on next page.

effective programs to which it commits. At this juncture, it is not clear how hard it will be to demonstrate that, for those components susceptible to ARD ULR, an effective program is unnecessary; and unless such a demonstration would be accepted for many components, it is important that an applicant be able to screen out components as not being susceptible to ARD ULR.

B. <u>The Problem with the Definition of ARD ULR</u>

Under the current rule, ARD ULR means degradation--

> (1) . . . whose effects are different in character or magnitude after the term of the current operating license . . . (2) whose effects were not explicitly identified and evaluated by the licensee for the period of extended operation and the evaluation found acceptable by the NRC; or (3) that occurs only during the period of extended operation.

10 C.F.R. § 54.3. Because the three clauses in the definition above are connected with "or," degradation is ARD ULR if any of the three clauses is satisfied. Thus, under the literal wording of this definition, any degradation that has not already been explicitly identified, evaluated, and approved by the NRC for the renewal term is ARD ULR.

Footnote continued from previous page.

need for corrective action will be evaluated, ensure timely corrective action, and be implemented by facility operating procedures and reviewed by the onsite review committee. 10 C.F.R. § 54.21(a)(6). Such programs and procedures become subject to regulatory controls requiring review of any change by the onsite review committee and prior NRC approval of any change that decreases effectiveness. 10 C.F.R. § 54.23(d).

The phrase "whose effects were not explicitly evaluated by the licensee for the period of extended operation and the evaluation found acceptable by the NRC" in the definition of ARD ULR is not elaborated upon in Statement of Considerations ("SOC") published with the rule.[2/] It is my understanding that the B&W Owners' Group intends to explore utilizing this phrase to screen out SSCs. The hope (as I understand it) is that inspection and maintenance programs can be correlated with degradation mechanisms, that through (or with) this correlation such programs can be considered to be "explicit" evaluations of the effects of degradation during the renewal term, and that if such programs are found acceptable by the NRC, either as part of B&W's generic efforts or in a plant-specific IPA, the components subject to such programs can then be screened out as not susceptible to ARD ULR.

The difficulty with this position is that most maintenance programs do not "explicitly" evaluate degradation mechanisms for the renewal term. Nor is it clear that such an evaluation and NRC acceptance can occur as part of the NRC's review of an application for license renewal. There is some indication that phrase "whose effects were not explicitly evaluated by the licensee for the period of extended operation and the evaluation found acceptable by the NRC" is intended to accommodate advanced reactors originally designed, analyzed and reviewed for an extended life. All degradation in currently licensed plants then becomes ARD

2/ 56 Fed. Reg. 64,943 (1991).

ULR, because the current licensing bases of existing plants do not include explicit, approved evaluations of aging for renewal terms. Under this reasoning, the current definition of ARD ULR would not allow any component to be screened out as not being susceptible to ARD ULR.

This result could be avoided by altering the conjunctions in the definition of ARD ULR as follows:

> *Age-related degradation unique to license renewal* is degradation --
>
> That occurs during the term of the current operating license but whose effects are different in character or magnitude after the term of the current operating license (the period of extended operation), AND whose effects were not explicitly identified and evaluated for the period of extended operation and the evaluation found acceptable by the NRC; or
>
> That occurs only during the period of extended operation.

This change would still allow the B&W Owners' Group to argue that components subject to accepted programs do not experience ARD ULR, but degradation would not automatically be ARD ULR in the absence of explicit, accepted evaluations.

Proceeding by interpretation instead of rule change would leave an applicant vulnerable to contentions by an intervenor in a renewal proceeding and eventually to a challenge upon judicial review of the final renewal decision. Even if the NRC Staff accepted B&W's position, an Atomic Safety and Licensing Board might decide that the approach is precluded by the literal wording of the rule. A Licensing Board would be bound if B&W's position were accepted in a Commission policy statement, but a

Commission policy statement would not constrain a reviewing court or preclude the court from deciding that screening violated the literal wording of the rule. In view of the specific wording of ARD ULR, there is a significant risk of a successful challenge to any reinterpretation at odds with the literal meaning.

C. The Evaluation of Aging Mechanisms

The change to the definition of ARD ULR above would allow components to be screened out. Certain statements in the SOC, however, indicate that an applicant must evaluate each component's degradation mechanisms before concluding that ARD ULR cannot occur. Responding to NUMARC's then-proposed screening methodology, which would have allowed components to be screened out at the front end of the IPA process if subject to an "established effective program," the SOC states,

> [E]limination of structures and components important to license renewal from further aging consideration on the basis of an *a priori* claim by a licensee that they are subject to an effective program is not an acceptable technical basis since it does not include an evaluation of the possibility of age-related degradation problems unique to license renewal and an evaluation of the adequacy of the program to manage age-related degradation. Such an approach could result in elimination of most if not all of the structures and components in the plant from any substantive consideration for age-related degradation. An acceptable technical basis should include a demonstration by appropriate technical arguments that the age-related degradation is not unique to license renewal or programs for managing age-related degradation unique to license renewal are effective.
>
> * * *
>
> [A] licensee may, <u>after evaluation of age-related degradation mechanisms</u>, conclude that an SSC is not subject to age-related degradation unique to license renewal. A

> routine replacement schedule may be a consideration in reaching such a conclusion. . . . However, the Commission does not believe it can make a generic determination at this time with respect to the acceptability of all periodic replacement schedules.

56 Fed. Reg. at 64,956, 64,958 (emphasis added).

Requiring an applicant to evaluate degradation mechanisms before screening out components makes the screening process more complicated and expensive. It also creates a potential for contentions by an intervenor challenging the identification and evaluation of degradation mechanisms.

In order to eliminate the apparent requirement that an applicant evaluate aging mechanisms before screening out components, BG&E proposes adding to the rule the statement that:

> Components that could have age related degradation unique to license renewal are those not subject to inspection and routinely replaced or refurbished at defined intervals (long lived components).

Components that are routinely replaced or refurbished cannot experience degradation unique to license renewal, and their reliability will be adequately assured, both in the current term and the renewal term, by the maintenance rule.

One could attempt to accomplish the same result by Commission reinterpretation. The Commission could, for example, issue a policy statement concluding that routinely replaced or refurbished components are not susceptible to ARD ULR, and that the degradation mechanisms of such components need not be evaluated.

Relying on reinterpretation involves a fair degree of risk. First, opponents of the change in policy might challenge the policy statement on the ground that it is in fact a substantive rule change not properly promulgated with notice and comment procedures.

Opponents might also await an individual license renewal proceeding and then challenge the final decision on the application on the grounds that the IPA process was not implemented in accordance with the rule. The opponents would argue that the SOC demonstrated the meaning of the rule, that the meaning of the rule can only be changed by further rulemaking, not post hoc rationalizations, and that implementation of the rule in a manner other than originally intended is arbitrary and capricious. Proponents of the change in policy would argue that the rule itself is silent as to whether evaluation of degradation mechanisms is necessary. They might further argue that statements in the SOC calling for evaluation of degradation mechanisms were not statements explaining the meaning of the rule, but rather were statements explaining how the Commission initially intended to apply the rule, and that such statements do not preclude a change in policy.

It is not possible to predict the outcome of such a challenge with any great degree of certainty. The outcome would depend, in large measure, on the judicial panel hearing the challenge and the degree of deference given to the NRC. A challenge

by opponents to a policy statement purporting to alter the SOC, however, would be substantial, and there would be a significant risk that the NRC would be reversed.

III. The Risk of Rulemaking

There are two principal risks involved in amending the license renewal rule as discussed above. First, if the rule is being opened up to amendments, the NRC might propose or entertain other amendments expanding the license renewal rule. Second, the amended rule might be challenged by opponents.

It should also be recognized that the rulemaking process could take a year, and possibly several, to complete. If a rule-making proceeding is instituted, utilities or groups currently pursuing license renewal activities may suspend their activities until the final requirements are known. This could delay useful initiatives and th impetus on the NRC in the short term to move forward with and support license renewal.

A. The Risk of an Expanded Rule

That the license renewal rule would be expanded because of a rulemaking proceeding does not appear particularly likely at this juncture. To date, there has been no indication that the NRC

Staff wishes to expand the rule and there have been no suggestions for change by States or public interest groups.[3/]

There are a few areas where the Staff could conceivably propose unfavorable amendments. The Staff could propose reconciling the scope of the license renewal rule with that of the maintenance rule by adding to the definition of SSC Important to License Renewal those SSCs that are relied upon in Emergency Operating Procedures and those SSCs that are trip initiators. Such a change would inject uncertainty into the IPA process, but the potential significance of such a change would be greatly reduced if the NRC also allowed short lived components to be immediately screened out.

The NRC Staff might also seek to use a rulemaking proceeding to resolve in its favor some the issues it has been debating with the industry -- in particular, whether new codes and standards rather than the current licensing basis should be used to address fatigue, environmental qualification of equipment, and unresolved safety issues. However, if the NRC Staff is willing to inject these issues into a rulemaking proceeding, it can also be expected to pursue its previous positions through policy recommendations to the Commissioners as part of the Senior Management Review process. In such case, whether the issues are debated in

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3/ States and public interest groups have commented on the environmental rulemaking proceeding currently underway and may remain focused on the NEPA issues.

a proposed rule or in a proposed policy statement may not be particularly significant.

The potential for new requirements being adopted in response to comments by States or public interest groups is smaller. The NRC may limit a rulemaking proceeding to the particular changes that it has proposed and can reject public comments that advocate additional changes or that seek to revisit the philosophy underlying the original rule. The NRC, however, is not precluded from making additional changes suggested by additional comments, though it would be required to provide further notice and opportunity to comment on changes representing a significant departure from the originally proposed amendments.

B. The Risk of Opposition

Although there no assurance, one should assume that opponents will oppose and challenge amendments to the license renewal. The likelihood of such a challenge would be increased if the amendments seek to exclude short lived components from aging evaluations. There is a possibility that a proposed rule simply amending the conjunctions in the definition of ARD ULR might be perceived as a technical correction and go unchallenged.

The likelihood of opposition does not necessarily translate into an adverse outcome. First, proponents of the changes may prevail both before the Commissioners and upon judicial review. Although the arguments have not yet been fully developed, the

concept of eliminating short lived components from aging evaluations appears technically defensible.

If proposed amendments were defeated by opponents, the industry would not necessarily be any worse off than it is now. If an opponent seeks judicial review of amendments to the license renewal rule, the validity of the amendments, and not the prior rule, should be the focus of the review. Consequently, if the reviewing court vacated and remanded the amendments, one would expect the rule to revert to its current form.

It is possible that a Court's decision could affect the validity of the underlying rule. If an opponent challenged the the proposed amendments before the Commission on the ground that the amended rule does not satisfy requirements in the Atomic Energy Act and the Commission responded by rediscussing such previously decided issues as the adequacy of the current licensing basis, the Commission could reopen the underlying philosphy of the rule to reconsideration upon judicial review. See Public Citizen v. NRC, 901 F.2d 147, 150 (D.C. Cir. 1990), cert. denied, 111 S. Ct. 536 (1990). Even if the Commission does not open up the entire rule, a reviewing court might make findings that would compomise the validity of the underlying rule, or otherwise cause the Commission to reconsider the underlying rule.

This risk can be minimized if the Commission keeps a new rulemaking proceeding focused on specific proposed amendments and treats the underlying rule as a previously decided matter not to

be discussed or revisited. As long as the Commission keeps the rulemaking focused, the risk of the entire rule becoming subject to challenge in court is not great.

Probably the greater risk, but one almost impossible to assess, is that amendments might prompt Congressional concern and political intervention. As evidenced by the political opposition to the NRC's "Below Regulatory Concern" policy statement and the subsequent NRC retreat in opposition to such opposition, political opposition can completely derail NRC initiatives even when those initiatives are technically sound. License renewal, however, does not evoke the same sort of grassroots opposition as waste disposal. Given the new administration and Congress, this could change and the political risk cannot be discounted, but these is no basis at this point to view the risk as particularly significant.

IV. Conclusion

Overall, the potential benefits of a rule change appear to outweigh the risks of rulemaking. Unless the NRC interprets the definition of ARD ULR in the manner suggested by the B&W owners' group, the definition of ARD ULR is unworkable. Even if the NRC interprets the definition of ARD ULR in the manner suggested by the B&W Owners' group, there is a significant risk that such interpretation could be successfully challenged by opponents. Amending the definition would allow screening and eliminate this

uncertainty. The risks of pursuing these amendments exist, but do not appear particularly significant. The likelihood of the rule being expanded appears small, and the most likely outcome of a successful challenge to any amendments to the rule is reversion to the current rule.

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Lic. Renewal
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MEMORANDUM

TO: Robert W. Bishop, Esquire
Vice President and General Counsel
NUMARC

FROM: Joseph Gallo

SUBJECT: Strategy for Minimizing the Litigation Risks Associated with Various Proposals to Clarify the NRC's License Renewal Regulations

DATE: March 5, 1993

I. Introduction

NUMARC and the U.S. Nuclear Regulatory Commission (NRC) agree that change is needed with respect to the present formulation of the NRC's license renewal regulation, 10 C.F.R. Part 54. Several proposals for change have been offered by industry and the NRC. These proposals appear to offer the opportunity to establish a more stable licensing process for renewing reactor operating licenses.

Some industry and NRC representatives, including NRC's Director of Reactor Regulation, favor guidance as the vehicle for change. They oppose the use of rulemaking because of the perceived risk that such action will reopen the Part 54 regulation

to a general reconsideration of its basic principles, an unnecessary and unproductive exercise.

Others, both within the industry and the NRC, believe this risk can be managed. They believe the use of NRC-written guidance creates more significant risks. The use of guidance, in the view of the rulemaking proponents, creates a high-probability risk that a federal court would invalidate the guidance and renewed licenses relying thereon because of the agency's failure to comply with the notice and comment rulemaking procedures of the Administrative Procedure Act.

The proponents of rulemaking are also concerned about the long-term risk of regulatory instability presented by the guidance approach. NRC guidance is more easily changed than regulations; and therefore, guidance is more subject to ill-considered revisions. Moreover, a rule, with limited exceptions, forecloses challenges by intervenors in hearings involving individual license renewal applications. NRC guidance, on the other hand, can be challenged generally in hearings, thereby prolonging applicant vulnerability to the NRC hearing process.

It is the purpose of this Memorandum to evaluate and weigh the risk associated with circumventing the rulemaking procedures of the Administrative Procedure Act and the risk of reopening the license renewal regulation generally for comment and objection; and to recommend a course of action.

II. The Use of Written NRC Guidance to Effect Change to Part 54

Baltimore Gas & Electric, in early January 1993, assembled knowledgeable individuals from several utilities, NUMARC and EPRI to review Part 54. The purpose of the review was to determine whether perceived problems with Part 54 could be remedied by interpretative guidance or whether a rule change was needed. The BG&E group concluded that guidance would suffice except in three areas, which in their judgment required rule-making amendments to Part 54.

BG&E proposed to clarify the definition of age-related degradation unique to license renewal (ARDUTLR) (10 C.F.R. § 54.3), add a provision to the integrated plant assessment (IPA) process excepting short-lived components from evaluation for ARDUTLR (10 C.F.R. § 54.21(a)(3)), and reduce the amount of IPA information required for inclusion in licensee FSARs. The BG&E group properly concluded that these substantive revisions to Part 54 were subject to the notice and comment rulemaking procedures of the Administrative Procedure Act. For a further discussion of these proposals, please refer to the BG&E paper that was presented at the January 15, 1993 NUMARC PLEX Work Group Meeting, which is entitled "Industry Positions on the License Renewal Issues delineated in the Commission's December 21, 1992 Staff Requirements Memorandum" and the Memorandum on "Benefits and Risks of Amending the License Renewal Rule," dated January 7, 1993, that was prepared by David Lewis, Esquire.

On January 29, 1993, the Director of NRC's Division of Nuclear Reactor Regulation presented his assessment of Part 54 and his recommendations for change. Dr. Murley's description was necessarily vague, since the implementing details were not developed at the time of the meeting. He apparently contemplates using the performance-based maintenance programs (being developed as an implementation of NRC's maintenance regulation) as a means for "screening out", that is, excluding, systems and components important to license renewal before any analysis is undertaken to identify age-related degradation mechanisms unique to license renewal. Dr. Murley's recommendations are now better understood, since the NRC released, on March 4, 1993, the explanation and discussion of those recommendations in SECY-93-049.

not true

Dr. Murley also stated that his recommendations could be accomplished by written guidance interpreting the existing license renewal regulations. He opposed any rule change to Part 54 as unnecessary, and as I understand it, because of his perception of the potential adverse impacts of reopening the license renewal regulation.

On February 3, 1993, the NUMARC General Counsel convened a meeting of several industry lawyers to determine the extent of the legal risk, if any, associated with implementing the Murley proposal through the issuance of NRC guidance documents in lieu of a rulemaking amending Part 54. It was concluded that Dr. Murley's recommendations revised the IPA provisions of 10 C.F.R. § 54.21, and that the recommendations could not be reconciled with the explicit and contrary language of section

54.21 and the accompanying statement of considerations. Thus, there was general agreement among the lawyers that Dr. Murley's recommendations could not be implemented by guidance without incurring a substantial risk in individual licensing cases of a successful federal court challenge for failing to comply with the notice and comment procedures of the Administrative Procedure Act. This conclusion is re-examined in Section V, based on an examination of SECY-93-049.

All known proposals for change to the IPA process have been reviewed by various industry lawyers; and they have uniformly concluded that the likelihood of a successful court challenge in individual renewed license hearings is very high if the various initiatives for change were implemented by guidance, including an NRC policy statement. It has been suggested that the issuance of a policy statement with notice and comment procedures could also be used. Notice and comment and other rulemaking trappings could be added to the normal process for issuing a policy statement, thereby creating, except in name, a rulemaking process meeting the requirements of the Administrative Procedure Act. This form of "rulemaking" is a less desirable alternative to the regular rulemaking process, but the policy statement rulemaking approach could be used if competing policy considerations favor it. The same risk of reopening the license renewal regulation, as perceived by Dr. Murley and others, would exist, however.

III. Rationale for Limiting the Scope of Any License Renewal Rulemaking

An agency regulation can be challenged in its entirety if the agency in question by some new rulemaking action creates the opportunity for renewed comment and objection. Montana v. Clark, 749 F.2d 740 (D.C. Cir. 1984). Freighting a notice of proposed rulemaking seeking to amend an existing regulation with a restatement of the unchanged portion of the regulation and explaining it in general policy terms provided a renewed opportunity for comment and objection, despite the agency expressly limiting comments to only the narrowly framed new proposed amendment. Ohio v. EPA, 838 F.2d 1325 (D.C. Cir. 1988). A suggestion in the notice of proposed rulemaking that the agency was attempting to harmonize past decisions caused a court to conclude the agency was rethinking the entire rule, and the court allowed reopening despite an express statement that proposes changes would only supplement the rule. Association of American Railroads v. ICC, 846 F.2d 1465 (D.C. Cir. 1988).

On the other hand, a narrowly crafted amendment to an existing regulation that avoids the pitfalls mentioned above does not warrant a general reopening of the basic regulation. American Iron and Steel Institute v. EPA, 886 F.2d 390 (D.C. Cir. 1989). The court stated: "The 'reopening' rule of Ohio v. EPA is not a license for bootstrap procedures by which petitioners can comment on matters other than those actually at issue, goad an agency into a reply, and then sue on the grounds that the agency had reopened the issue. To so read Ohio v. EPA would

undermine congressional efforts to secure prompt and final review of agency decisions." Id. at 398.

The Court of Appeals for the District of Columbia Circuit had occasion to decide whether an NRC policy statement concerning training could be reopened in its entirety despite the limited reach of proposed amendments. Public Citizen v. NRC, 901 F.2d 147 (D.C. Cir. 1990). Although the court discussed Ohio v. EPA and the other cases cited above, it declined to apply the Ohio "reopening" rule. The Court, instead, concluded that the initial policy statement represented a temporary agency decision to not use rulemaking as a substitute process. The revised policy statement, in the view of the court, "reexamined this choice and made it permanent." Thus, the question of whether a policy statement or a rulemaking were the proper procedural vehicle was still ripe for challenge. Because this case did not apply the "reopening rule" announced in Ohio v. EPA, it has no application to the rulemaking under consideration here.

Following the teachings of Ohio v. EPA and its progeny, any changes to Part 54 should be limited in number and they should not rely on either new policy developments or hint at an agency intention to reconsider the merits or the wisdom of the underpinnings of Part 54, as originally promulgated. This can be accomplished for license renewal in three ways.

First, a rulemaking initiative to clarify and conform an existing provision of Part 54 to coincide with the agency's original intent does not provide the opportunity to expand the rulemaking to a general reexamination of its purpose and under-

lying basis. This premise could be used, for example, to clarify the definition of age-related degradation unique to license renewal.

Second, a rulemaking initiative to achieve regulatory efficiency, which is made necessary by a supervening event does not give way to a general reopening of the regulation. This proposition, for example, could be used to justify the need to eliminate regulatory overlap between the license renewal and the maintenance rules. The two rules generally followed separate but parallel rulemaking paths. The basic principles for license renewal, however, were established long before the maintenance activities were covered by a specific regulation and implementing guidance. Thus, a discontinuity occurred between the two regulations.

The implementing programs under the maintenance rule, 10 C.F.R. § 50.65, are currently being established, and they will be made effective in 1995. These programs will necessarily address the effects of age-related degradation mechanisms. It would seem logical to continue these programs during extended periods of operation. It makes no sense, as Part 54 now requires, to rejustify the effectiveness of maintenance programs to manage aging and age-degradation that have successfully accomplished these objectives for the first 40 years of plant operation. Had it been possible to be prescient, the two regulations would have been promulgated complementing one another. Maintenance programs would have been integrated into the Integrated Plant Assessment process of 10 C.F.R. § 54.21. The dynamics of

the two rulemakings prevented this result. Now that the direction of the maintenance rule and its implementing programs are discernable, a rulemaking to Part 54 that would recognize the effectiveness of maintenance programs to manage aging would be justified to avoid redundant and unproductive regulation by the agency.

This rationale could be used to limit the scope of any rulemaking that proposed to exclude short-lived components from the need to identify and evaluate age-related degradation unique to license renewal. It may also be a viable basis for implementing the Murley performance-based approach without creating the unacceptable risk of a general reopening of the license renewal regulation.

Third, a rulemaking initiative to modify a prior agency determination of the amount and type of information needed for its review of license renewal applications can be undertaken without jeopardizing the efficacy of the license renewal regulation. The agency may, as a part of its responsibilities under the Paperwork Reduction Act of 1980, take action to limit the generation of unneeded documents. This rulemaking would be administrative in character, and it would not pose an unacceptable litigation risk. This premise could be used to eliminate the present requirement under Part 54 to include comprehensive IPA analyses in the FSAR.

IV. An Assessment of Industry Proposals to Amend Part 54

Proposals for license renewal rule changes have been formulated by the BG&E Group, NUMARC and various participants of the NUMARC NUPLEX Working Group. These proposals, with certain variations, generally address short-lived components, the definition of ARDUTLR and the amount of information to be docketed and catalogued in the FSAR. A discussion of these topics follows.

The proposed revision to section 54.21(a)(3) to address short-lived components is the most important of the lot. This judgment is correct because effective screening can only be accomplished by dealing with hardware. Attempting, as the license renewal rule presently provides, to screen by identifying degradation mechanisms unique to license renewal, generates the unnecessary expenditure of engineering resources to support the quixotic search for the elusive, and likely nonexistent, mechanism that either behaves differently or causes different degradation effects during extended periods of operation.

All industry participants agree to the following general formulation -- the language may differ but the objective is the same, namely, to exclude short-lived components from the IPA process before it becomes necessary to evaluate for ARDUTLR. Section 54.21(a)(3) would read:

> "(3) For those SCs identified in paragraph (a)(2) of this section, identify the SCs that could have age-related degradation that is unique to license renewal. <u>Components that could have age-related degradation unique to license renewal are those not subject to</u>

inspection and routinely replaced or refurbished by established time or performance criteria."

The underscoring indicates the new language. This change could be justified, as indicated above, as being necessary to eliminate redundant regulation between Part 54 and the maintenance rule. The accompanying statement of considerations would explain that the implementation of NRC-accepted maintenance programs makes it unnecessary to examine short-lived components for ARDUTLR, since they will be inspected at regular intervals and replaced or refurbished before the advent of ARDUTLR. This, in my judgment, could be accomplished without a federal court permitting a general reopening of Part 54 for comment and objection.

The industry point paper, which was sent to Dr. Murley on January 22, 1993, suggested that the sentence added to Section 54.21(a)(3) should exclude components "not replaced by predefined criteria." This characterization is not recommended because it omits the inspection function and, more importantly, is unnecessarily limiting. "Predefined criteria" do not exist for many components, which nevertheless, should be screened out because they are inspected and routinely replaced or refurbished whenever wear requires it.

A proposed revision to the definition of ARDUTLR in 10 C.F.R. § 50.3 would clarify the definition to establish its original intended purpose, namely to separate or "screen out" non-unique age-related degradation from the license renewal process. The present language in section 50.3 fails to achieve

that objective. Again, several formulations have been proposed, but the concept is reflected in the following:

> "Age-related Degradation Unique to License Renewal is degradation -
>
> (1) that (i) occurs during the term of the current operating license but whose effects during the renewal term are different in character or magnitude, or (ii) occurs only during the renewal period; and
>
> (2) whose effects, in either circumstance, have not been addressed for the period of extended operation in an evaluation found acceptable by the NRC."

This reformulated definition would limit ARDUTLR to known mechanisms that are different in character or magnitude in the renewal period and newly-discovered mechanisms that occur only during the renewal period.

The proposed revision makes the definition workable, but it does not achieve the desired objective of screening out short-lived components before it becomes necessary in the IPA process to analyze them to identify and evaluate unique aging mechanisms. Only the addition of the sentence to section 54.21(a)(3), as explained above, accomplishes that objective.

The proposed revision to the definition could be justified as a simple clarification to establish the original intention of the definition, as explained in the statement of considerations accompanying the original Part 54. This, in my judgment, could be accomplished without the risk of reopening the entire regulation to comment and objection.

The industry point paper, which was sent to Dr. Murley on January 22, 1993, suggested that the ARDUTLR definition read:

> "Age-Related Degradation Unique to License Renewal is degradation -
>
> (1) That occurs during the term of the current operating license but whose effects are different in character or magnitude after the term of the current operating license (the period of extended operation); or
>
> (2) That occurs only during the period of extended operation; or,
>
> (3) For standard plant designs certified under 10 C.F.R. Part 52, that have not been explicitly identified and evaluated by the licensee or license applicant for the period of extended operation, and the evaluation found acceptable by the NRC."

This formulation is not recommended because the introduction of Part 52 reactors is new. Nothing in the Part 54's statement of considerations or the underlying NUREG documents hints at the notion that Part 52 was considered in any manner whe the ARDUTLR definition was written. Thus, in my opinion, the introduction of Part 52 in the definition as part of a rulemaking poses a high risk of reopening Part 54 generally to comment and objection.

Finally, the industry has proposed that the wording in the preamble of section 54.21 be revised to limit the amount of information that would be required for the FSAR. The information excluded from the FSAR will be maintained at the plant site and be available for NRC perusal, as it is deemed necessary. The language proposed in the NUMARC point paper follows:

54.21 Contents of Application - Technical Information

Each application must include an integrated plant assessment required by this part.

(a) The Integrated Plant Assessment (IPA). The IPA must:

50.37 Additional records and record-keeping requirements.

(b) The results and conclusions of the IPA required by section 54.21 shall be presented in a supplement to the Final Safety Analysis Report (FSAR). The annual FSAR update required by 10 C.F.R. § 50.71(e) must include an update to this supplement. The annual FSAR update . . .

The new language is underscored. These rule changes with NRC Staff agreement could be justified under the Paperwork Reduction Act of 1980. They could be handled as ministerial housekeeping types of changes, since it is essentially within the province of the Staff to decide the type and extent of the information it needs to review a license application. The proposal should be abandoned if the Staff objects, since there is no chance that the Commission would override the Staff's judgment in this regard.

The BG&E paper (the complete reference is on page 3) suggested that the FSAR documentation issue be handled as follows:

"54.21 Contents of Application - Technical Information

Each application must include a supplement to the Final Safety Analysis Report (FSAR) that presents the results and conclusions of the

integrated Plant Assessment described in this section. Supporting documentation for these results and conclusions, including the information described below, must be available for review in conjunction with the license renewal application review process.

(a) The Integrated Plant Assessment (IPA) must:

(1) Using processes for controlling such SSCs under the current licensing basis, identify the SSCs which
(a) are important to license renewal,
(b) contribute to the performance of a required function, or could if they fail to prevent an SSC important to license renewal from performing its required function, and
(c) could be subject to age-related degradation that is unique to license renewal.

(2) Describe and justify the method used in paragraph (a)(1) of this section. The description must include:
(a) The specific criteria for determining whether an SSC is important to license renewal.
(b) The criteria for evaluating whether an SC is necessary for the performance of a required function, and
(c) The technical criteria to be used in determining whether an SC is subject to age-related degradation unique to license renewal.

(3) For each SC identified in paragraph (1) of this section, demonstrate that the age-related degradation unique to license renewal
(a) Is addressed through an effective program or
(b) Need not be addressed by an effective program."

This formulation is not recommended. It eliminates the present requirement in Section 54.21 for lists of SSCs, _et cetera_. As a result, it was necessary to rewrite the IPA process. The rewrite could be characterized either as non-substantive scrivening or as creating a new IPA philosophy. Although judgments may differ, I believe the BG&E formulation is more likely to be characterized as a new IPA philosophy, thereby creating the substantial risk of reopening Part 54 to general comment and objection.

V. The Murley Proposal

Dr. Murley's proposal for improving the license renewal process in Part 54 is set forth in SECY-93-049. This document was released for public consumption on March 4, 1993. Dr. Murley states that no changes to the Part 54 regulations are needed to facilitate his recommendations, including those concerning the restructuring of the IPA process. He proposes to implement his IPA recommendation by the issuance of written guidance.

What follows is an assessment of Dr. Murley's IPA recommendations to determine whether they must be implemented by rule to avoid a substantial risk that renewed licenses relying on the new Murley guidance would be invalidated because the guidance is contrary to the requirements of Part 54. Parenthetically, it is not the purpose of this assessment to judge the technical or licensing merits of Dr. Murley's recommendations.

I conclude that the Murley (hereinafter "staff") approach must be implemented by rule to effectively reduce the substantial legal risk expressed above. This opinion is based

both on the characterization and expressions of policy contained in the SECY document and a detailed comparison of the staff's new IPA recommendations with the existing IPA process in Section 54.21.

Section 54.21, generally, requires each applicant for license renewal to perform an IPA to analyze SSCs important to license renewal for ARDUTLR; and once ARDUTLR mechanisms and their effects are identified, applicants are to manage and mitigate such degradation. Other requirements exist in section 54.21, but the foregoing distills the essence of the IPA process required by the regulation. The staff in the SECY document recommends a change to this process.

The staff plainly acknowledges that the focus of the IPA process would change from "the identification of aging that is or is not unique to the renewal term" to "effective programs" (SECY, p. 3). It is not intended to abandon the original IPA approach. It would remain available as a part of Section 54.21 to be used at an applicant's option. It is equally clear, however, that the staff considers the focus on effective programs to be a "more effective and efficient implementation" of the IPA process (SECY, p. 2) given the emerging staff judgment that aging effects can be effectively managed by "performance and condition monitoring of plant equipment" (SECY, p. 3).

Thus, the staff's statement that it would change the present focus of the IPA process signals a substantive change to the regulation requiring a rule change. The change in focus, however, is not dispositive of the issue. It is necessary to

compare the staff's new "effective program" requirements to determine if it is fairly encompassed by the existing language of Section 54.21.

Section 54.21(a)(3) states that applicants must identify "SCs that could have age-related degradation that is unique to license renewal." The staff's new IPA focus would give the word "could" its usual non-prescriptive meaning suggesting that the staff is free to fashion an intuitive presumption that ARDUTLR and its effects exist with respect to all SSCs important to license renewal. The statement of considerations belies this interpretation. An actual analysis of all SSCs important to license renewal for the effects of ARDUTLR is required (56 Fed. Reg. 64954 (third column), 64955 (first column) and 64956 (first and second columns), Dec. 13, 1991). It may make sense to create the presumption recommended by the staff, but it represents a substantive change requiring a rule change.

An effective program, among other things, must "ensure identification and mitigation of ARDUTLR" (Section 51.24(a)(6)). The staff's new focus would not satisfy that required element of an effective program because it assumes that all ARDUTLR effects are known. Degradation whose effects are different in character or magnitude during the renewal period, or degradation that occurs only during such period (the Section 54.3 definition of ARDUTLR) are not presently known or known not to exist. Plain logic dictates that these unique effects or occurrences cannot be mitigated if they are not investigated and identified at the outset when the "effective program" is established. Moreover,

surveillance activities (the staff's safeguard to a valid process, SECY, p. 5) cannot be expected to be sufficient to detect these unique effects, if they remain unidentified. Thus, the staff's new focus would not "ensure identification and mitigation of ARDUTLR." It may be that it is not necessary to acquire this assurance. If so, a rule change is needed, not policy guidance.

In sum, the staff's declaration of the change in IPA focus together with its departure from the express language of section 54.21 and the supporting SOC leads to a conclusion that implementation of the Murley approach by policy guidance will create a substantial litigation risk and basis for invalidating renewed licenses relying on that guidance. The risk can be mooted by implementing the new IPA focus, as described in SECY-93-049, by rulemaking.

VI. Conclusion

The various industry proposals discussed above for Part 54 change require rulemaking to avoid the substantial risk of federal court reversal in individual renewed licensing hearings because of the use of written guidance. If it is decided to adopt the rulemaking course, the amendments and supporting rationales for avoiding reopening Part 54 to general comment and objection should be adopted. Technical adjustments to the language of the proposed amendments and rationales would be appropriate. Finally, the Murley proposal, if implemented by guidance, poses a risk equal to that described above for implementing any of the industry proposals through the issuance of NRC guidance.

Lic Renewal
Vol. 6

JRC

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Memorandum

December 7, 1992

The NRC Commissioners were briefed today by the agency's staff concerning current positions and implementation plans with respect to the NRC's license renewal rule, 10 C.F.R. Part 54. The briefing also addressed the staff's recommendation for harmonizing the license renewal rule with the on-going implementation activities of the maintenance rule.

Tom Murley stated at the outset of the briefing that the license renewal rule is logical and reasonable, and that he saw no reason at the present time to change the rule. He did acknowledge later in the briefing, however, that Part 54 and the accompanying statement of considerations (SOC) did not permit the staff to narrow its focus as to what to review for license renewal, but flexibility did exist to limit the extent of the review on some SSCs.

Murley apparently believes that his staff's license renewal reviews can be truncated once they determine that an SSC does not "suffer" from age-related degradation unique to license renewal. It is not obvious how truncated reviews would assist the industry given the staff's insistence at the briefing and with Murley's tacit approval, that all SSCs important to license renewal had to be evaluated first to identify age-related degradation mechanisms.

Murley intends to establish an NRR senior management review group to examine present license renewal issues. Although he did not enumerate the issues; it became clear during the briefing that the issues included the definition of SSCs important to license renewal, credit for present maintenance programs and the new license conundrum.

John Craig made the presentation about the license renewal rule and its implementation. He made his usual competent presentation. Craig defended the staff's actions on implementation, both in his formal presentation and in response to questions from the Chairman and Commissioner Curtiss, as being mandated by or consistent with Part 54 and the SOC. He pressed this theme too far in my view. The Chairman was prompted at one point to enjoin that the staff should not take too legalistic a

view of Part 54 and the SOC. It seemed, at least to the Chairman, that sufficient flexibility existed under the present Part 54 licensing regime to solve any implementation problems through prudent policy decisions. Selin urged that the staff formulate and present recommendations to this effect.

Bill Russell presented the maintenance rule briefing. He observed that the two rules had differences. License renewal was a process/prescriptive rule. Maintenance a performance base rule. This difference is always stressed by the staff with the implication being that this is a significant impediment to harmonization. The staff, however, never explains the basis for this view, nor does it suggest means for overcoming the perceived problem.

Russell also observed that the definition of SSCs was very similar in the two rules, but that differences did exist. Again, this was implied to be an obstacle to harmonization with no suggestion whether the problem could be surmounted.

Russell adopted the existing staff proposal for harmonizing the two rules, namely, that licensees interested in license renewal augment their maintenance programs to include the ability to develop the IPA information required by Part 54. This suggestion does not serve to eliminate unnecessary engineering evaluations or promote harmony between the two rules, as explained in the NUMARC AHAC position paper. In sum, the Russell briefing showed no movement by the staff towards real harmony between the two rules. It was clear that staff management was not willing, at this time, to embrace any of the ideas expressed in Commissioner Curtiss' recent memorandum to the EDO.

There was almost no mention of the fatigue and EQ issues, except that Murley stated they would be reviewed by the senior management review team. The unworkable definition of age-related degradation unique to license renewal was not mentioned at all.

The positions of the staff briefers and the Commissioners were of particular interest.

1. John Craig was uncompromising in his view that present staff actions were consistent with the Commission's direction in Part 54 and the SOC.

2. Tom Murley was conciliatory indicating that all staff issues and positions were subject to evaluation (and potential change) by the NRR senior management review team.

3. Chairman Selin's perception of the license renewal rule was that the IPA properly provided for a broad review and inquiry, but that the extent of the review should be tempered by the importance of the SSCs. He seemed of the opinion that the "tempering" could be handled by policy decision within the current licensing structure of Part 54.

4. Commissioner Curtiss aggressively questioned, as explained below, the staff's approach to license renewal. He was sympathetic to any constraints imposed by Part 54 on the NRC, but he was looking for the better approach to license renewal, even if it might require a rule change. The staff, on the other hand, was not ready to go that far.

5. Commissioner Remick appeared to lean towards the Curtiss view. He asked whether the staff/BWOG interactions might not distract from the resolution of the license renewal issues by the senior management review team. Curtiss questioned whether it made sense to enter into extensive discussions with BWOG until the policy decisions were made. Murley answered that he expected the work of his review team to be finished by two months; and that meetings would be held with BWOG, in the meantime, but not of an intensive nature.

Curtiss questioned whether the license renewal SOC would be written the same way given the on-going maintenance activities. Murley said that [handwritten: today] was an issue for his senior management review team.

Curtiss questioned why staff wanted degradation evaluations, etc., for license renewal beyond that needed for first 40 years under maintenance rule. Why, Curtiss asked, an across-the-board requirement to evaluate aging mechanisms before it was determined that such mechanisms were unique to license renewal? Murley indicated the issue would be reviewed by his team.

Curtiss stated that staff technical positions seemed to be based on the form of the license (new license) rather than technical bases. He pointed out that the NRC General Counsel had supplied a legal opinion that the form of the license was irrelevant to a determination of the technical and safety requirements of license renewal. Murley said the matter would be considered by his review team.

Tom Murley praised the BWOG and their license renewal effort in very complimentary terms. He stated BWOG had a proven track, adequate commitment of resources and no irrelevant licensing distractions like the Rowe first 40-year RPV problem. Murley also expected the BWOG effort to be more productive than the effort expended by the lead plants.

Joseph Gallo

Lic Renewal
Vol. 6